30. (Amended) A computer system for searching for a document, said system comprising:

a client system and a server system, said client system supplying a search request to said server system, said server system providing abstracts of documents to said client system, said abstracts corresponding to said search request, said client system displaying said abstracts on a screen display, said abstracts including a written abstract and a first visual abstract of each of said documents, said server system creating a second visual abstract of one of said documents, each of said first visual abstract and said second visual abstract respectively being a thumbnail image of said document, said second visual abstract being larger than said first visual abstract when displayed on said screen display said client system displaying said second visual abstract when requested by a user.

REMARKS

Attached hereto is a marked up version of the changes made in the specification and claims by the current Amendment. The attached page is captioned **"Version with markings to show changes made."**

It is noted that the claim amendments herein are intended solely to more particularly point out the present invention for the Examiner, and <u>not</u> for distinguishing over the prior art or the statutory requirements directed to patentability. That is, the claim amendments herein are not intended to differentiate from the Downs reference, since, as explained below and even with the Examiner's prerogative to interpret claim language as broadly as possible, the pre-amended independent claims of the present Application would not reasonably read on the Downs reference.

It is further noted that, notwithstanding any claim amendments made herein, Applicant's intent is to encompass equivalents of all claim elements, even if amended herein or later during prosecution.

Claims 1-33 are all of the claims pending in the present Application. Claims 10 and 17-21 stand rejected under 35 USC §102(e) as anticipated by US Patent 6,070,176 to Downs et al. Claims 1-6 and 12 stand rejected under 35 USC §103(a) as unpatentable over Downs, further in view of US Patent 5,842,206 to Sotomayor and US Patent 5,933, 140 to Strahorn et al. Claims 11, 13, 22, 23, 24, and 27-31 stand rejected under 35 USC §103(a) as unpatentable over Downs, further in view of Strahorn et al. Claims 7, 14, 25, and 32 stand rejected under 35 USC §103(a) as unpatentable over Downs, further in view of Strahorn et al. and Sotomayor, further in view of US Patent 6,307,573 to Barros.

These rejections are respectfully traversed in view of the following discussion.

I. THE CLAIMED INVENTION

As described and claimed (e.g., by claim 10), the present invention is directed to a method of processing search results obtained in response to a user query. Document pointers returned by a search engine are examined to identify a source from which documents are available. The source documents are obtained. A visual abstract for each of the documents is generated, each visual abstract being an image thumbnail formed by manipulating a corresponding source document so as to enhance visibility of at least a first portion of the source document while degrading visibility of at least a second portion of the source document. A stream of data is formatted such that when the data is displayed on a display screen, each visual abstract appears adjacent to a corresponding search result.

II. THE PRIOR ART REJECTION

In general, Applicants respectfully assert that the rejection of record fails to meet the USPTO's burden of a prima facie rejection. The cited art references are not relevant since none shows the use of a visual abstract to speed up evaluation of a search result. The Examiner clearly

merely uses the claims as a road map to weave together isolated elements and clearly ignores the plain language of the claims.

The present invention provides a solution to the problem of efficiently evaluating a search result without having to take time to download the actual Web document unless and until the user expects the document to be significant. This solution is achieved by providing, adjacent to a corresponding search result entry, a compressed image of the document, as optionally enhanced for readability of portions of the document. In a preferred embodiment, the user can view a larger compressed image to better preview the document prior to deciding whether to take time to download the actual document. A textual abstract or other description can also be provided with each corresponding search result entry.

The cited prior art references do not teach, suggest, or render obvious the present invention's solution of providing one or more thumbnail images of the document, adjacent to its corresponding search result, in order to provide a user a visual abstract as a preview of the document and help decide whether to download the actual document.

The Rejection for Claims 10 and 17-21

The Examiner alleges that US Patent 6,070,176 to Downs et al. anticipates the invention as described by claims 10 and 17-21.

The are a number of basic flaws in the rejection on record for these claims.

First, it is uncertain from the rejection of record exactly what the Examiner is considering in Downs as being a "visual abstract". That is, Applicants traverse the Examiner's characterization that lines 6-7 of column 3 of the Downs' reference (" a map includes a visual indication of the relevance of individual Web documents to a user's search criteria") would be considered by one of ordinary skill in the art as equivalent to the "visual abstract" of the present invention. Figure 3 of Downs shows only a rectangular shape as representing each document. A simple rectangular shape cannot reasonably be considered as an "abstract", when this term is commonly understood as a "summary of a text, technical article, speech, etc." (see, e.g., Webster's Universal College Dictionary, Random House, copyright1997).

In contrast, and as very clearly demonstrated by the figures of the present Application, the "visual abstract" of the present invention is actually a thumbnail image of the original document (see, for example, line 9 of page 9 of the disclosure) as optionally modified for enhancement (see page 15, beginning at line 3).

The Examiner additionally points to lines 16-20 of column 3 of Downs and alleges that "... the visual representation using colors and shapes constitutes a visual abstract of the page." This last statement adds to the uncertainty of exactly what feature(s) of Figures 3 and 4 that the Examiner is relying upon as being the "visual abstract". That is, this description is understood by Applicants as referring to "other information" (see lines 15-16 of column 3), including: "popularity of a Web site, the length of a Web document, and the number of hypertext links in a Web document" (lines 16-19). As best understood by Applicants, none of these items of "other information" can be reasonably described as constituting a "visual abstract of the page", since each contains at most summary information related to a web site or a document rather than a page.

Regardless, Applicants again respond that the term "visual abstract" of the present invention does not mean a textual abstract or merely even an "abstract that is visual" but, rather, refers to a thumbnail image as typically obtained by image compression (page 9 at lines 20-21). As shown in Figure 1 of the present Application, the present invention additionally provides a text abstract of each search document, which text abstract clearly demonstrates that "visual abstract" does not mean a text abstract.

One advantage of the thumbnail image taught by the present invention over the technique described in Downs is that the thumbnail image "provides the user with a clue about how the document looks as well as provides a preview of the selected document's content".

Second, and just as important, even if the labels (see line 19 of column 5) taught in Downs should be considered as a "visual abstract", the Examiner's characterization that in Downs "each visual abstract appears adjacent to a corresponding search result (figure 3)" is clearly incorrect. The technique in Downs presents no search result (unless one wishes to consider that the overall mapping image shown in Figure 3 is loosely defined as the search result), let alone a search result adjacent to the corresponding document abstract.

The Examiner continues by stating: "[n]ote that the data corresponding to the result may be within or adjacent to the visual representation". This final statement again adds doubt as to how the Examiner interprets Downs as satisfying the description of claim 10 since the Examiner seems, with this statement, to consider the "visual representation", presumably meaning the overall mapping image shown in Figure 3, as equivalent to a "visual abstract".

Hence, turning to the clear language of the claims, there is no teaching or suggestion of " ... generating a <u>visual abstract</u> for each of said documents, each visual abstract being <u>an image thumbnail</u> formed <u>by manipulating a corresponding source document</u> so as to enhance visibility of at least a first portion of said source document while degrading visibility of at least a second portion of said source document; and formatting a stream of data such that when said data is displayed on a display screen, <u>each visual abstract appears adjacent to a corresponding search result</u>", as required by claim 10.

For the reasons stated above, the claimed invention as described by claims 10 and 17-21 is fully patentable over the Downs et al. reference.

Additionally, relative to claim 19, Applicants respectfully traverse that Downs et al. teaches any <u>enhancement</u> to the title and/or header.

Relative to claims 20 and 21, Applicants respectfully traverse that Downs et al. teaches any <u>enlargement of the title/heading relative to a second portion</u> of the source document.

The Rejection for Claims 1-6 and 12

The Examiner <u>concedes</u> that Downs et al. fails to disclose the generation of at least two different-size visual abstracts for the search documents and displaying the smaller visual abstract adjacent to the corresponding search result. To overcome this deficiency, the Examiner relies on US Patent 5,842,206 to Sotomayor and/or US Patent 5,933,140 to Strahorn et al.

First, Applicants respectfully assert that all of the deficiencies identified above for the rejection of claim 10 apply equally well for claim 1. Neither secondary reference overcomes these deficiencies.

Second, relative to making up the deficiency as identified by the Examiner in Downs et al.,

by combining either secondary reference (Sotomayor or Strahorn) with Downs, Applicant respectfully traverse that a proper motivation has been provided in the rejection of record.

More specifically, relative to combining Sotomayor with Downs, the Examiner is understood as considering that the summary display shown in Figures 3 and 4 of Downs would be improved by adding for each document an abstract for each concept in that document. The Examiner says: "This allows viewers to look at different aspects of the document and determine its relevance without downloading and reading in its entirety".

However, there are at least two basic flaws in the Examiner's urging to combine Sotomayor with Downs. First, it overlooks that the technique in Downs inherently already provides the capability to determine the relevance of each document "without downloading and reading in its entirety" by showing the relative distance of the search documents. Second, the urged combination destroys the primary intent articulated at lines 3-9 of column 2 of Downs of providing "an intuitive way of graphically representing a portion of the World Wide Web". That is, the primary purpose of Downs is that of eliminating the textual abstract provided back by a search engine (column 1 at line 66 through line 1 of column 2). Thus, Downs actually teaches against making the combination urged by the Examiner.

Moreover, the "abstracts for each of the concepts of each document" as taught in Sotomayor are not equivalent to the thumbnail visual abstracts of the present invention. Additionally, even if the concept abstracts of Sotomayor were visual abstracts, there is no reasonable justification for the Examiner's statement that "the smaller one appears adjacent to a corresponding search report".

Hence, turning to the clear language of the claims, there is no teaching or suggestion of in the combination of Downs and Sotomayor of " ... generating at least two visual abstracts for one of said documents, each of said visual abstracts being thumbnail images of a different size; and formatting a stream of data such that when said data is displayed on a display screen regarding said one of said documents, a smaller one of said visual abstracts appears adjacent to a corresponding search result", as required by claim 1.

Relative to combining Strahorn et al. with Downs, the Examiner's rationale is not well

understood in the rejection of record. First, it is noted that the Strahorn reference concerns the representation of a help page as being a <u>child window of an active Web page</u> (column 4 at lines 30-33) and, therefore, is totally unrelated to the representation of a <u>search report</u>. Second, as discussed at lines 33-35 of column 4, the miniaturized depiction is a "rasterized depiction of the active Web page". That is, the miniaturized depiction is <u>not</u> a visual <u>abstract</u> since this description is understood by Applicants as the <u>entire Web page merely reduced in size</u>, a concept inherently quite different from an abstract.

Third, Applicants respectfully traverse the Examiner's characterizations that Figure 3 of Strahorn shows "that when the data is displayed on a display screen regarding one of the documents, a smaller one of the visual abstracts appears adjacent to a corresponding search result". That is, there is <u>no search result</u> shown in Figure 3, only the <u>URL of the active Web page</u>.

Moreover, relative to Figure 3, the more reduced image of the Web page is that shown in the help page representation 322, rather than the larger representation having the URL as part of the display screen. Thus, the smaller of the two representations is not the one that is adjacent even to the URL.

Finally, combining Strahorn with Downs suffers from the same contradiction noted above for combining Sotomayor with Downs in that Downs teaches <u>away from</u> adding information (such as <u>help information</u>) to a search report.

Hence, turning to the clear language of the claims, there is no teaching or suggestion of in the combination of Downs and Strahorn of " ... generating <u>at least two visual abstracts</u> for one of said documents, each of said visual abstracts being <u>thumbnail images</u> of a different size; and formatting a stream of data such that when said data is displayed on a display screen regarding said one of said documents, <u>a smaller one of said visual abstracts appears adjacent to a corresponding search result</u>", as required by claim 1.

The Rejection for Claims 11, 13, 22-24, and 27-31

The Examiner <u>concedes</u> that Downs et al. fails to disclose the generation of a larger visual abstract for one of the documents. To overcome this deficiency, the Examiner relies on US

Patent 5,933,140 to Strahorn et al.

First, Applicants respectfully assert that all of the deficiencies identified above for the rejection of claim 10 apply equally well for claim 11 and 13 that are dependent on claim 10.

Second, as pointed out above, combining Strahorn with Downs suffers from the same contradiction noted above for combining Sotomayor with Downs in that Downs teaches away from adding information (such as help information) to a search report.

Third, relative to the rejection of claim 11 in Paragraph 22 of the Office Action, Applicants respectfully traverse the Examiner's characterization that Strahorn teaches using a larger visual image that "allows users to more easily view and navigate throughout the document". As clearly indicated in column 4 at lines 25-37, the images provided in Figure 3 all contain the same amount of information, since they are all merely miniaturized depictions of the active Web page. Therefore, the relative size of the miniaturized depictions makes no difference.

Fourth, relative to the rejection of claim 13 in Paragraph 23 of the Office Action, Applicants respectfully traverse that the Examiner has stated anything meaningful. That is, the Examiner first concedes that Downs fails to teach a larger visual image on demand. Then the Examiner is understood as stating that Strahorn teaches "only one abstract, but the purpose is the same". The final statement in Paragraph 23 in which the Examiner says: "This allows the abstract to serve its purpose of delivering information as needed and not taking up valuable screen space when the user is focused on something else" at best seems irrelevant and at least is contradictory to Figure 3 of Strahorn, in which is shown both a small child image 322 and a larger image 304. It can hardly be said that Strahorn Figure 3 saves valuable screen space.

Relative to the rejection for claim 28 in Paragraph 24 of the Office Action, Applicants respectfully traverse the Examiner's statement: "A cache memory by definition ... stores for a period of time or usage." Although it can be stated that a cache typically is designed to store for usage, it cannot be said that a cache typically is designed to "store for a period of time", which is the limitation of claim 28.

Relative to the rejection in Paragraph 25 for claims 22, 29, and 30, Applicants respectfully traverse the Examiner's characterization that Figure 3 of Strahorn "includes a written summary".

It is clear that the two images shown in Figure 3 show the entire active Web page, not a written summary. It is also clear that the smaller image of the two is the one presented on demand, not the larger image, as described in column 4 at lines 25-35. It is also clear, contrary to the Examiner's motivation to modify Downs, that neither the smaller child image nor the larger image contains any more or less information, since they are each merely "a rasterized depiction of the active Web page" (column 4 at line 34).

Relative to the rejection in Paragraph 26 for claims 23 and 31, it can hardly be said that the combination of Downs and Strahorn enhances visibility of any portion of the document when the images are each merely "a rasterized depiction of the active Web page" (column 4 at line 34).

The Rejection for Claims 7-9, 14-16, 25, 26, 32 and 33

The Examiner concedes that the combination of Downs, Sotomayor, and Strahorn fails to teach the limitations of these claims and relies upon US Patent 6,307,573 to Barros to demonstrate that it was known in the art to display a larger abstract when a cursor is moved over a small abstract and to then remove the larger image when the cursor is moved away.

However, none of the displays in Barros can be considered as visual abstracts of documents of a search result. Nor, contrary to the Examiner's characterization in the rejection, does Barros make any suggestion to use an event handler in the manner described in these claims. Applicants are not attempting to claim the isolated concept of invoking an event handler. Rather, the present invention uses an event handler as one element in a very concrete solution for the problem of efficiently evaluating a search result.

Further, the other prior art of record has been reviewed, but it too even in combination with the Downs, Sotomayor, Strahorn, or Barros references, fails to teach, suggest, or render obvious the claimed invention.

III. FORMAL MATTERS AND CONCLUSION

The Examiner objected to Figure 7 as having label 50 not mentioned in the text. Applicants have revised the text to address this objection. However, under separate cover,

Applicants propose a drawing change to Figure 7 to add the label 44 for the document title, as mentioned in the paragraph corrected to add label 50. The Examiner also objected to Figure 9 as failing to include label 800 as discussed in the text. The proposed drawing change adds this label to Figure 9. Upon approval by the Examiner, these changes will be incorporated into the drawings. Based on these proposed drawing changes, Applicants request that the Examiner reconsider and withdraw the drawing objections.

In view of the foregoing, Applicant submits that claims 1-33, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Assignee's Deposit Account No. 09-0441.

Respectfully Submitted,

Date: 10/16/02

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION

The paragraph beginning at line 4 of page 16 has been revised, as follows:

After the rendering, standard proportional resizing can be applied to the temporary document to create the visual abstract as shown in Fig. 7, which includes a small visual abstract <u>50</u> with enhanced title/headings 44.

IN THE CLAIMS:

The claims have been amended, as follows:

1. (Amended) A method of processing search results obtained in response to a user query, the method comprising:

providing document pointers returned by a search engine to identify a source from which documents are available;

generating at least two visual abstracts for one of said documents, each of said visual abstracts being <u>thumbnail images</u> of a different size; and

formatting a stream of data such that when said data is displayed on a display screen regarding said one of said documents, a smaller one of said visual abstracts appears adjacent to a corresponding search result.

10. (Amended) A method of processing search results obtained in response to a user query, the method comprising:

examining document pointers returned by a search engine to identify a source from which documents are available;

obtaining said documents from said source;

generating a visual abstract for each of said documents, each visual abstract being <u>an image thumbnail</u> formed by manipulating a corresponding source document so as to enhance visibility of at least a first portion of said source document while degrading visibility of at least a

second portion of said source document; and

formatting a stream of data such that when said data is displayed on a display screen, each

visual abstract appears adjacent to a corresponding search result.

22. (Amended) A method of searching for a document, said method comprising:

supplying a search request;

providing abstracts of documents on a screen display that correspond to said search

request, said abstracts including a written summary and a first visual abstract of each of said

documents;

creating a second visual abstract of one of said documents, <u>each of said first visual</u>

<u>abstract and said second visual abstract respectively being a thumbnail image of said document,</u>

wherein said second visual abstract is larger than said first visual abstract; and

displaying said second visual abstract when requested by a user.

29. (Amended) A program storage device readable by machine, tangibly embodying a program of

instructions executable by said machine to perform method steps for processing search results

obtained in response to a user query, said method comprising:

supplying a search request;

providing abstracts of documents on a screen display that correspond to said search

request, said abstracts including a written summary and a first visual abstract of said documents;

creating a second visual abstract of one of said documents, <u>each of said first visual</u>

<u>abstract and said second visual abstract respectively being a thumbnail image of said document,</u>

wherein said second visual abstract is larger than said first visual abstract; and

displaying said second visual abstract when requested by a user.

30. (Amended) A computer system for searching for a document, said system comprising:

a client system and a server system, said client system supplying a search request to said

server system, said server system providing abstracts of documents to said client system, said

abstracts corresponding to said search request, said client system displaying said abstracts on a screen display, said abstracts including a written abstract and a first visual abstract of each of said documents, said server system creating a second visual abstract of one of said documents, <u>each of said first visual abstract and said second visual abstract respectively being a thumbnail image of said document</u>, said second visual abstract being larger than said first visual abstract when displayed on said screen display said client system displaying said second visual abstract when requested by a user.